REMARKS

Applicant respectfully requests reconsideration of this application in view of the foregoing amendment and following remarks.

Status of the Claims

Claims 16 and 17 are pending in this application, and stand rejected. By this amendment, claim 16 is amended. No new matter has been added by this amendment.

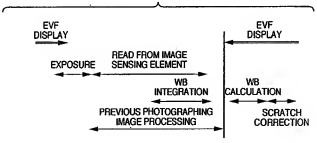
Rejection under 35 U.S.C.§ 103

In paragraph nine (9) of the Office Action, claim 16 has been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent No. 6,963,374 to Nakamura et al. ("Nakamura") in view of U.S. Patent No. 6,847,388 to Anderson ("Anderson") and U. S. Patent No. 6,847,388 to Taniguchi et al. ("Taniguchi"). In paragraph eleven (11) of the Office Action, claim 17 has been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Nakamura in view of Anderson and Taniguchi, and further in view of U.S. Patent No. 6,961,085 to Sasaki ("Sasaki").

Claim 16 has been amended for further clarification. One of the goals of the present invention as recited in claim 16 is to shorten the photographing interval in both a single shooting and a sequential shooting by utilizing a distributed memory areas. In particular, the image sensing apparatus of amended claim 16 recites, *inter alia*, "wherein, said control device controls that, ... , said display device is limited to display the live view image during the integral processing for the second RAW data is finished but the color space conversion processing for the first RAW data is not finished, said display device is allowed to display the live view image in response that the color space conversion processing for the first RAW data is finished after the integral processing for the second RAW data is finished, and said white balance calculation

device calculates the white balance coefficient of the second RAW data after said display device starts to display the live view image."

FIG. 5B



Referring to Fig. 5B as shown above, the image sensing apparatus of the present invention as recited in amended claim 16 includes the control device that performs unique control schemes including:

> (a) said image processing device processes a color space conversion for the first RAW data readout from said first area in accordance with start of reading the second RAW data from the image sensing element in the second image sensing operation, (PREVIOUS PHOTOGRAPHING IMAGE PROCESSING in Fig.5B).
>
> (b) the white balance integral processing for the second RAW data by said white balance integration device and the color space conversion for first RAW data by said image processing device processes are performed in parallel during reading of the second RAW data from the image sensing element, (WB INTEGRATION and PREVIOUS PHOTOGRAPHING IMAGE PROCESSING in Fig.5B).
>
> (c-1) said display device is limited to display the live view image during the integral processing for the second RAW data is finished but the color space conversion processing for the first RAW data is not finished, (EVF DISPLAY in Fig.5B).
> (c-2) said display device is allowed to display the live view image in response that the color space conversion processing for the first RAW data is finished after the integral processing for the second RAW data being finished, (EVF DISPLAY in Fig.5B).
> (d) said white balance calculation device calculates the white balance coefficient of the second RAW data after said display device starts to display the live view image (WB CALCULATION in Fig.5B).

See, also, paragraphs [0044]-[0052] of the corresponding published application (i.e., U.S. Pub. No. 2004/0090537 A1).

Nakamura discloses a digital camera technique where a high-priority live view processing is performed between writing of image signals and captured image processing.

Nakamura discloses that this shortens the time of not displaying a live view image, thereby preventing a shutter release opportunity from being missed. [Abstract] In other words, while Nakamura tries to prevent a shutter release opportunity from being missing, it uses substantially different scheme to achieve the goal, i.e., by shortening the time of not displaying a live view image. In contrast, the present invention utilizes dual memory areas and uniquely associated control schemes as described above (i.e., the control schemes indicated as (a)-(d)).

In the *Response to Arguments* section of the Office Action, the Examiner indicates, *inter alia*, that:

> One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references.[1]
>
> Nakamura does not explicitly teach first and second areas of memory for performing parallel processing. This is taught by Anderson. Anderson teaches that second image data is read out from the image sensing element and into memory at the same time first image data is read out from the memory for further image processing (See column 6, lines 47-56. Anderson states that "while input buffer A is filled with image data, the data from input buffer B is processed and transmitted to frame buffer B". Anderson teaches that color space conversion is part of the image processing that takes place during the transfer from the input buffer to the frame buffer, column 6, lines 19-32.).[2]

However, Applicant believes that Nakamura is <u>not</u> simply missing the first and second areas of memory out of the elements of claim 16 as amended, i.e., it lacks more elements of claim 16. For example, since Nakamura lacks the first and second memory areas, it automatically fails to teach the control schemes as recited in amended claim 16 discussed above, e.g., the control schemes indicated as (a) and (b), i.e., (a) said image processing device processes a color space conversion for the first RAW data readout from said first area in accordance with start of reading the second RAW data from the image sensing element in the second image sensing operation, and (b) the white balance integral processing for the second RAW data by said white balance integration device and the color space conversion for first RAW data by said

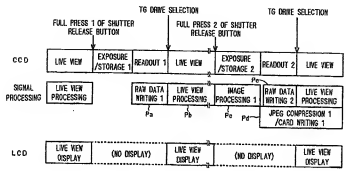
[1] Page 2 of the Office Action.
[2] Page 3 of the Office Action.

image processing device processes are performed in parallel during reading of the second RAW data from the image sensing element. Applicant notes that Nakamura fails to define a white balance integration processing and a white balance calculation process differently.

In rejecting the control scheme of claim 16, the Office Action relies on Fig. 8 and column 7, lines 24-33 of Nakamura. The cited portion of Nakamura describes that:

> In step ST10, a frame of raw data obtained by an immediately preceding image capture and stored in the DRAM 232 is read out over the DMA channel 2 and is subjected to image processing such as color space conversion in the image signal processor 211. This image processing, as indicated by the operation Pc of FIG. 8, is performed by utilizing the time for exposure and storage in the CCD 303, i.e., the time during which a live view display is not produced. This allows the effective use of a non-live-view-display state.[3]

Referring to Fig. 8 of Nakamura as shown below, it appears that the Examiner tries to equate the "IMAGE PROCESSING 1" (Pc) to the control scheme indicated as (a) above. However, the "EXPOSURE/STORAGE 2" is <u>not</u> an equivalent process to the "reading the second RAW data read from the image sensing element and stored in the second area of the memory," as recited in amended claim 16. For example, the output of the "EXPOSURE/STORAGE 2" process is <u>not</u> stored in a second area of the memory as required by amended claim 16.



[3] Col. 7, lines 24-33 of Nakamura.

Moreover, in Nakamura, a live view display is started after IMAGE PROCESSING 1(Pc) for a first image and RAW DATA WRITING 2(Pe) for a second image. However, the IMAGE PROCESSING 1(Pc) is finished before RAW DATA WRITING 2(Pe), i.e., the IMAGE PROCESSING 1(Pc) is not finished after RAW DATA WRITING 2(Pe). Therefore, Nakamura does not disclose or suggest that it is limited to display the live view image in a condition that the integral processing for the second RAW data is finished but the color space conversion processing for the first RAW data is not finished and that it is allowed to display the live view image in response to an operation that the color space conversion processing for the first RAW data is finished after the integral processing for the second RAW data is finished, as specifically recited in amended claim 16 (e.g., control schemes indicated as (c-1) and (c-2)).

Applicant further notes that Nakamura fails to teach the control scheme indicated as (d), i.e., said white balance calculation device calculates the white balance coefficient of the second RAW data after said display device starts to display the live view image.

The secondary reference Anderson discloses a method/system for providing an instant review of a last image on a viewfinder in an image capture device. Anderson determines the status and location of the last captured image and provides it to the viewfinder. Anderson is cited as disclosing the two input buffers A, B as shown in Fig. 4B. As Applicant explained the detailed operation of the Anderson's two buffers in previous responses, the operation scheme of the Anderson's buffers is substantially different from the two control schemes of the present invention as discussed above, i.e., Anderson is simply silent in disclosing the control schemes as recited in amended claim 16 discussed above.

As Applicant understand it, each of the other secondary references Taniguchi and Sasaki fails to show or suggest the inventive aspects of amended claim 16 including, e.g., the control schemes.

In view of the above, Applicant believes that the Office Action fails to establish a prima facie case of obviousness. To establish a prima facie case of obviousness, there must be (1) a showing that all claim elements are present in the cited references, MPEP § 2143.03, and (2) some suggestion or motivation, either in the references themselves or in the general knowledge available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. MPEP § 2143.01. Because both of these requirements have not been met, a proper prima facie case of obviousness has not been set forth in the Office Action and the rejection should be withdrawn.

Accordingly, each of claims 16, and 17 in depending from claim 16, is believed patentable over the cited references (i.e., Nakamura, Anderson, Taniguchi and Sasaki), either taken alone or in combination, for at least the reasons discussed above. Reconsideration and withdrawal of the rejections of claims 16 and 17 under 35 U.S.C. §103(a) is respectfully requested.

Applicant has chosen in the interest of expediting prosecution of this patent application to distinguish the cited documents from the pending claims as set forth above. However, these statements should not be regarded in any way as admissions that the cited documents are, in fact, prior art.

Applicant believe that the application as amended is in condition for allowance and such action is respectfully requested.

AUTHORIZATION

No petitions or additional fees are believed due for this amendment and/or any accompanying submissions. However, to the extent that any additional fees and/or petition is required, including a petition for extension of time, Applicant hereby petitions the Commissioner to grant such petition, and hereby authorizes the Commissioner to charge any additional fees, including any fees which may be required for such petition, or credit any overpayment to Deposit Account No. 50-4827 (Order No. 1004288.51910). A DUPLICATE COPY OF THIS SHEET IS ENCLOSED.

An early and favorable examination on the merits is respectfully requested.

Respectfully submitted,
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